

Analysis of self medication practice among medical undergraduates: a study in tertiary care teaching hospital, Bareilly

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ABSTRACT

Background: Self medication is becoming a most prevalent practice among educated people across the world. In today's era, internet and media is one of the most important sources for promoting self medication practice. Medical students are highly influenced with this practice. Many drugs can have significant unwanted effects. This may result in serious clinical effects with potential life-threatening complications. Objective of the study was to find out the self medication practice and its details among medical undergraduates of SRMSIMS, a tertiary care teaching hospital, Bareilly.

Methods: During the study period 1st, 2nd and 3rd prof. of MBBS students were included in the study. Sample size was 348. They were asked to fill printed semi structured validated questionnaire which consist of straight forward multiple type questions. The duration of study was March 22nd 2015 to 29th March 2015.

Results: Out of 300 students, 60% (n=180) students were male and 40% (n=120) were females. Among them 94% (n=282) gave positive response and 6% (n=18) gave negative response to self-medication. Antibiotics were the most common class of drug self medicated by the majority of participants (80%) while the most common illness was fever (70%).

Conclusions: It was concluded that more than half of strength of students are likely to take self-medication for various illnesses; the reason might be the awareness of drugs due to easy accessibility of information through books, internet pharmacy and through media too. So, essential measure should be taken to reduce the practice of self medication among students to avoid development of drug dependence, resistance and drug interactions.

Keywords: Antibiotics, Medical undergraduates, Self medication

INTRODUCTION

As stated by WHO "Self-medication is the selection and use of medicines by individuals to treat self recognized illness or symptoms." It is becoming the most prevalent practice among medical students. It involves the usage of medicines without seeking prescription from the physician to treat self recognized disorders or symptoms but it can differ from self care because it can be harmful also.¹ It includes self pharmacological treatment, non-drug self-treatment, social support in illness, and first aid in everyday life.

The World Health Organization (WHO), reported about self-medication that sub-optimal prescribing practices such as inadequate dosing, incomplete treatment courses

and indiscriminate drug use have contributed to the emergence and spread of antimicrobial resistance.²

A survey on widely advertised medications indicated that the majority of college students used at least one of the advertised products, without discussing this with their physicians.³

In several studies, it has been found that inappropriate self-medication causes wastage of resources, increases resistance of pathogens and generally causes serious health hazards such as adverse drug reactions, prolonged suffering and drug dependence.^{1,4} Medical students have easy access to various information regarding the illness through literatures and medical books to medicate and diagnose themselves.

In today's era, internet and media is one of the most important sources for promoting self medication practice. Young students are highly influenced with this practice. Many drugs can have significant unwanted effects. This may result in serious clinical effects with potential life-threatening complications. Therefore, the diagnosis by the physician is very important for the proper treatment. The pharmacist in a community pharmacy has an important role in recommending drugs for self-medication.

The pharmacist should distinguish between patients for whom pharmacists could recommend the drugs and patients who should be encouraged to consult physicians. With the time self medication practice is inflating day by day. Though it is associated with many problems like disease not being diagnosed properly, wrong drug and incorrect dosage of the drug which can lead to progression of the disease along with complications. So, students from medical background assume self medication as a special significance as they are the future medical practitioners and also, they are well exposed to the drugs and diseases. This practice has both pros and cons depending upon the situation of the disease and patients. The present study was, therefore, conducted to analyse the self medication practice among undergraduates of Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly.

METHODS

Design of the study was a cross-sectional, questionnaire-based study.

Study participants

During the study period, three batches of MBBS students were included in the study. Sample size was 348. They were asked to fill printed semi structured validated questionnaire which consist of straight forward multiple type questions. The duration of study was March 22nd 2015 to 29th March 2015.

Ethical issues

Prior permission was obtained from the Ethics Committee of the Institution for conducting the study. The purpose of the study was explained to the participating students and confidentiality was ensured.

RESULTS

Out of all participants enrolled in the study, 300 successfully filled the questionnaire. Out of those, 60% (n=180) students were male and 40% (n=120) were females. Among them 94% (n=282) gave positive response and 6% (n=18) gave negative response to self-medication (Figure 1). Among these 300 students, 33%, 35% and 32% were studying in their first professional,

second professional and third professional (part 1 and 2) respectively (Table 1).

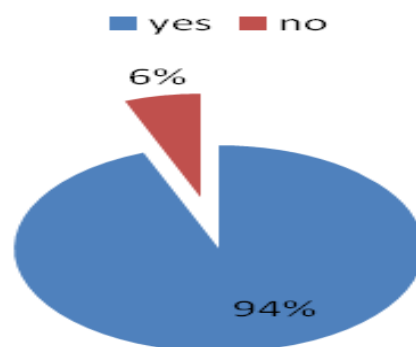


Figure 1: Response of participants to self medication.

Table 1: Demographic characteristics of the study population.

MBBS year	Percentage (n)
1 st prof	33% (99)
2 nd prof	35% (105)
3 rd prof	32% (96)
Gender	
Male	60% (180)
Female	40% (120)
Age group	
Below 20	28% (84)
21-23	49% (147)
24 and above	23% (69)

It was found that the prevalence of self medication is very high among medical students as they use their own experiences which they are getting in hospital environment. Internet played a key role to encourage the students for self medication (85%) while (78%) referred books for the same (Table 2).

Table 2: Resources of awareness about the drugs.

Resource	Percentage (n)
Books	78% (234)
Internet	85% (255)
Seniors	46% (138)
Family and relatives	56% (168)

47% of students self medicated as they have sufficient knowledge to treat themselves, while 45% opined that trivial illnesses are not the reason to see the doctor. These two were the top most reasons for taking self medication. Rest were taking the drugs on the grounds of saving time and avoiding crowd in OPD i.e. 17% and 9% respectively whereas 5% used self medication for privacy (Figure 2).

Antibiotics were the most common class of drug self medicated drugs by the majority of participants (80%),

followed by analgesics (73%) and antipyretics (66%). It was also observed that number of other classes was also self medicated like tonics (24%), antihistaminics (23%), antidiarrhoeals (20%) and antiulcer drugs (11%). Some potentially harmful drugs were also found to be used like sedatives (5%) (Figure 3). Out of those participants who experienced any of the side effects, 60% consulted the physician while 20% changed or stopped the medication.

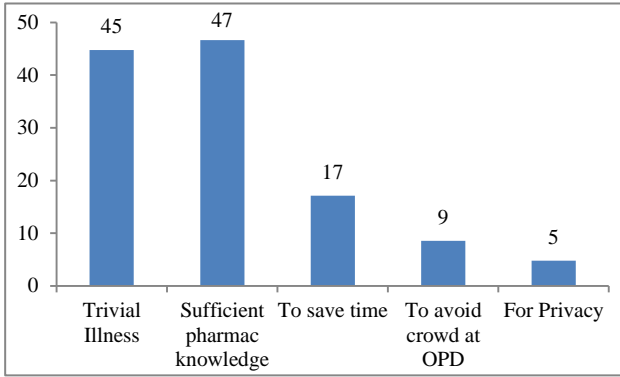


Figure 2: Common reasons for self medication.

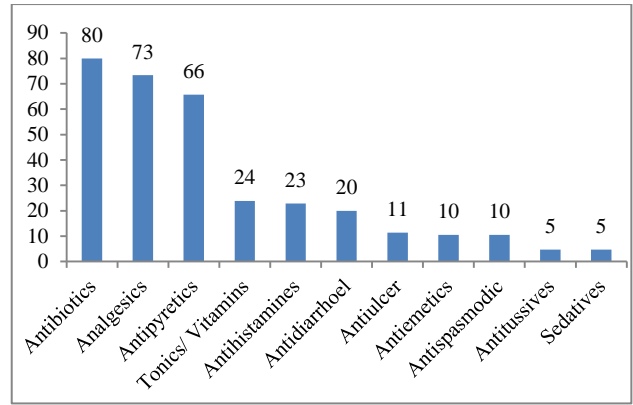


Figure 3: Comparison of categories of drugs self prescribed.

Study found that conditions prompting self medication were fever (70%), and headache (68%) others being pain (59%). Cough and cold (53%), vomiting (34%), sore throat (32%) and diarrhoea (27%) (Figure 4).

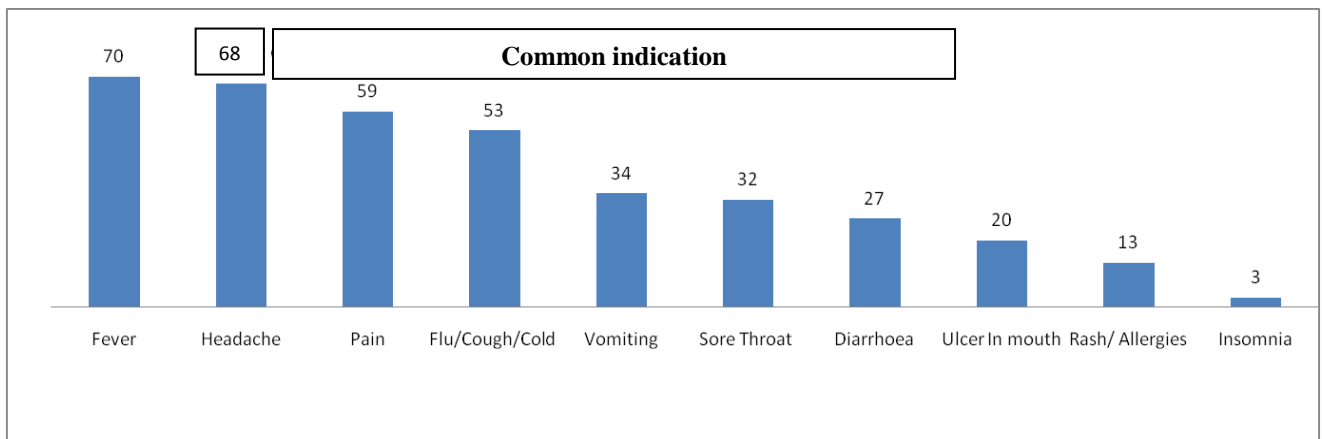


Figure 4: Common indication for self medication among students.

There were different opinions of participants regarding the methods to prevent the increasing trend of prevalence of self medication among medical graduates. 29% participants had no opinion regarding this matter. 27% opined awareness and education regarding implication of self medication, 23% said supply of medicine without prescription should be prevented. Making health care facility easily available was the answer of 13% participants and enforcing strict rules against misleading pharmaceutical advertisements (5%) (Figure 5). Self-medication is becoming an increasingly important area within healthcare, and this study has shown that it is even more prevalent among medical students.⁴ It was also noted that the participants with medical background has shown more prevalence of taking self medication. Self-care, including self-medication, has been a feature of healthcare for many years and people have always been

keen to accept more personal responsibility for their health status.⁵

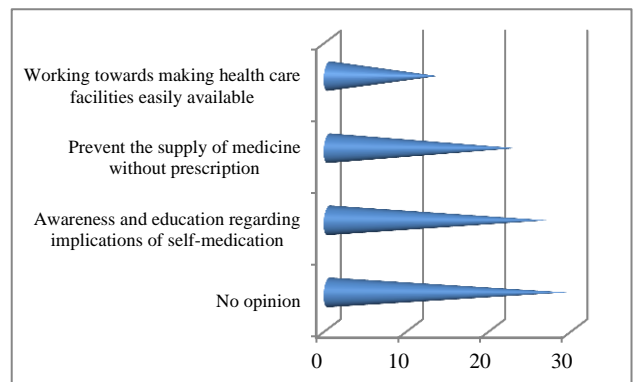


Figure 5: Perception of students regarding methods to prevent the growing trend of self-medication.

DISCUSSION

In our study, the prevalence of self medication was found to be 94%, which is somewhat in accordance with the other studies conducted in India where the prevalence of self-medication among the medical students was shown to be ranging between 57.1% and 92%.⁶⁻⁸ Though it is very difficult to compare the prevalence of different studies with present study due to different demographic characteristics, different methodology, and different socioeconomic status.

Gender is considered as an important factor in self-medication patterns among young adults including students. The prevalence of self-medication was observed to be higher among males (60%) in our study. This differs from a previous study conducted among medical students, which showed a greater prevalence among female students (45%) than male students (44%).¹

Among self medicators, the most common reason for it was sufficient knowledge regarding drug and disease (47%) followed by trivial illness (45%) which has got the similar results with previous studies.^{6,8} The another reason was to save time (17%) which was the unique feature of this study. It was also found that the self medicators medicate themselves in order to avoid crowd at OPD (9%).

In the present study, the most commonly used category of drugs was antibiotics (80%) which is also in line with a separate study where antibiotics use was (73%) on contrary to this in some studies most common category was analgesics (81%).^{1,9} In our study analgesics comes to rank 2 (73%) followed by antipyretics (66%). Problems related to self medication are wastage of resources and serious health hazards such as drug dependence, adverse drug reactions and prolonged suffering. Antimicrobial resistance is another problem worldwide particularly in developing countries where antibiotics are often available without a prescription.¹⁰ Students were not afraid of using antihistamines (23%) or sedatives (benzodiazepines) (5%) despite of knowing all the adverse effects. These findings were in concordance with Badinger S et al, where use of antihistaminics was 20% and that of sedatives were 2%.¹¹

The common reasons for self medications reported in our study were fever (70%) that is a minor ailment followed by headache (68%), pain (59%), cough and cold (53%), vomiting, sore throat (34%) and (32%) respectively and these findings are in concordance with the study conducted by Damodar. G, showed that the conditions like cold, headache and fever were the most common illness for self-medication.^{12,13}

The study group cited their source of information for self medication in most cases as internet (85%) followed by books (78%) and seniors or classmates (46%); this is similar to other studies, which showed medical students

use their academic medical knowledge more than 50% of the time to self-medicate.⁹

The trend towards self-medication is increasing day by day. Our study participants suggested different ways for preventing the growing trend of self-medication like awareness and education for the same.

CONCLUSION

Thus our study demonstrates that self medication practice in students of Medical College is on the rise, the reason might be the awareness of drugs due to easy accessibility of information through books, internet pharmacy and through media too. If no strict action is taken, the incidence of adverse drugs reactions or drug interactions may go on increase with time. So essential measure should be taken to reduce the practice of self medication among students by conducting seminars, promoting the correct usage of drugs, or by delivering innovative lectures about the drugs. These activities will sensitize the students regarding irrational use of drugs and ultimately community will be benefitted.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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